

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

Review and updation of Mining Plan REPORT

Kolkata regional office

Mine file No : KOL/JHK/SB(W)/FE(V-1)

Mine code : 30JHK18015

- (i) Name of the Inspecting : **P002**) **PHILLIP HAPADGARA**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri Rahul Kishore, Agent, Sri Ashish Kumar, Mining Eng
Official with
Designation
- (iv) Date of Inspection : 18/05/2023
- (v) Prev.inspection date : 17/03/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **VIJAY - II IRON ORE MINE**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : JHARKHAND
District : SINGHBHUM (WEST)
Village : GHATKURI
Taluka : NOAMUNDI
Post office : BARAJAMADA
Pin Code : 833221
FAX No. : 0657-2386056
E-mail : rajesh.rajan@tatasponge.co
Phone : 0657-7102462
- (f) Police Station :
- (g) First opening date : 16/08/2005
- (h) Weekly day of rest :
2. Address for : Ghatkuri, At & PO - Barajamda
correspondance Jharkhand
833221
3. (a) Lease Number : JHK0047
(b) Lease area : 155.08
(c) Period of lease : 50
(d) Date of Expiry : 17/08/2055
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : TATA STEEL LONG PRODUCTS LTD.
 AT & P.O.- JODA, KEONJHAR
 ORISSA
 Phone:
 FAX :

Owner : ASHISH ANUPAM
 M/S TATA STEEL LONG
 PRODUCTS LTD., 11 FLOOR,
 TATA CENTRE, 43, JN ROAD,
 KOLKATA KOLKATA WEST BENGAL
 Phone:
 FAX :

Agent : RAHUL KISHORE
 Vijay II Irone Ore Mine At
 & PO - Barajamda PS - Gua,
 Dist - West Singhbhum
 SINGHBHUM (WEST) JHARKHAND
 Phone: 9264459020
 FAX :

Mining Engineer

Name : Debashish Mukherjee, Full Time
 Qualification : B.E. in Mining Engineering
 Appointment/ : 07/01/2021
 Termination date

Mining Engineer

Name : RAMASHISH KUMAR, Full Time
 Qualification : DEGREE IN MINING ENGINEERING
 Appointment/ : 03/07/2019
 Termination date

Mining Engineer

Name : SURESH KUMAR JENA, Full Time
 Qualification : DEGREE IN MINING ENGINEERING
 Appointment/ : 03/07/2019 07/01/2021
 Termination date

Geologist

Name : Debasis Das, Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 03/07/2019
 Termination date

Geologist

Name : Ashis Mohanty, Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 29/09/2023
 Termination date

Geologist

Name : Ajoy Kumar Nandi, Full Time
 Qualification : M.Tech in Geo Exploration
 20/01/2021 27/12/2021

Appointment/ :
Termination date

Geologist

Name : Sudipta Das, Full Time
Qualification : M.Sc. in Geology
Appointment/ : 27/12/2021 29/09/2023
Termination date

Manager

Name : NAVEEN SRIVASTAVA
Qualification : Degree in Mining
Appointment/ : 20/02/2020
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif.of approved Mining Plan	06/01/2009
		Mining Scheme rule 12 MCDR1988	20/08/2010
		Modif.approved Mining Scheme	14/06/2013
		MP modif under 17(3) MCR 2016	22/09/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	nil	32 holes (1406.5 meter)	All the backlog boreholes of previous area have been completed.
1b	Exploration over lease area for geological axis 1 or 2	155.078 ha	155.078 ha	100% mineralized area (75.550) explored in G1 level. Area proved as non-mineralized - 79.528 ha (31.025 ha in G1 & 48.503 ha in G2)
1c	Exploration Agencies and Expenditure in lakh rupees during the year	-	Expl. Agency - Gemco Kati Exploration Pvt. Ltd;	100% mineralized area (75.550) explored in G1 level. Area proved as non-mineralized - 79.528 ha (31.025 ha in G1 & 48.503 ha in G2)
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	potential mineralized are have been covered under G1
1e	Balance reserve as on 01/04/20	12.8342 million tonnes	12.8342 million tonnes	nil
1f	General remarks of inspecting officers on geology, exploration etc	-	-	mine is situated in the western limb of the regional horse-shoe shaped synclinorium. The iron ore zone occurs as a tabular body, underlain by BHJ/BHQ, shale etc. and overlain by laterite capping. The deposits generally trend NNE-SSW with westerly dip. The entire potential mineralized area (75.5 ha) have been covered under G1

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry 1&2 (Section 6A-6A' to 16-16') N: 53025 - 53771 E: 29915 - 30195	Quarry 1&2 (Section 6A-6A' to 16-16') N: 53025 -53771 E: 29915 -30195	nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	nil
2c	Stripping ratio or ore to OB ratio	1:0.11	1:0.12	nil
2d	Quantity of topsoil generation in m3	Nil	Nil	no top soil on proposed area
2e	Quantity of overburden generation in m3	281557 Cum	268934.6 Cum	nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Development have been done on proposed location and maintained separate benches in OB and mineral.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	Quarry -1 Quarry - 2
3b	Quantity of ROM mineral production proposed	2500000 T	2250806.7 T	nil
3c	Recovery of sailable/usable mineral from ROM production	2500000 T	2250806.7 T	100% recovery considered
3d	Quantity of mineral reject generation	Nil	Nil	no reject generation

3e	Grade of mineral rejects generation and threshold value declared.	no proposal	NA	nil
3f	Quantity of sub grade mineral generation.	no proposal	nil	nil
3g	Grade of sub grade mineral generation	NA	NA	nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	Mechanized method	nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no proposal	nil	nil
3j	Provision of drilling and blasting in mineral benches	Deep Hole Drilling Dia:- 110 mm Depth: - 9 m Spacing: - 4 Burden: -3 Explosive used: - Cartridge	Deep Hole Drilling Dia:- 110 mm Depth: - 9 m Spacing: - 4 Burden: -3 Explosive used: - Cartridge	nil
3k	Provision of mining machineries in mineral benches	Provision of mining machineries in mineral benches kept in proposal	As per provision in Mining Plan	nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9m bench height kept in provision	bench height maintained at 9m	nil
3m	Total area covered under excavation/pits	54.47 Ha (at the end of plan period)	54.2 Ha (total area covered under pit)	nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.11	1:0.12	nil

3o	Total area put in use under different heads at the end of year	Mining: 54.47ha, Mineral Storage: 5.13 ha,	Mining: 54.2ha, Mineral Storage: 5.13 ha,	nil
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 4000000 T 2019-20: 4000000 T 2020-21: 2500000 T 2021-22: 2500000 T 2022-23: 2500000 T	2018-19: 2496005.32 T 2019-20: 1770365.27 T 2020-21: 2499753.171 T 2021-22: 2499502.95 T 2022-23: 2250806.70 T	nil
3q	General remarks of inspecting officers on method of mining etc.	-	-	Mining is been done by mechanized method maintaining bench height of 9m, drilling and blasting is been done as per approved plan.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate stacking for topsoil & Mineral	Separate stacking for topsoil & Mineral	nil
4b	Location of topsoil, OB and mineral reject dumps	Waste Dumping Location E/W-30207-30037 N/S-54265 - 54064	Waste Dumping Location E/W-30207- 30037 N/S-54265 - 54064	Nil
4c	Number of dumps within lease area and outside of lease area	Nil	Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	temprory dump proposed within the UPL After Exhaustion of mineral back filling has been done	temprory dump proposed within the UPL	temprory dump proposed within the UPL After Exhaustion of mineral back filling has been done
4e	Number of active and alive dumps.	1	1	nil

4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	proposal for retaining wall and garland drain is kept in proposal	As per proposal	nil
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall - 265 meters Garland drains - 250 meters	Retaining wall - 445 meters Garland drain - 300 meters	nil
4j	Number of settling ponds	no proposal	nil	nil
4k	Specific comments of inspecting officer on waste dump management	-	-	The generated OB is used for backfilling of the mining area, due to lack of availability some part of the waste is being temporarily dumped at the pit. later dump will be handled again for backfilling of the mining area.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Yes	Yes	The area used for backfilling are totally mined out
5b	Area under backfilling of mined out area	0.5 Ha	0.28 Ha	Mineral is not exhausted completely in the rest area
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of topsoil for restoration or rehabilitation of mined out area after backfilling	as per proposal	nil

5d	Total area fully reclaimed and rehabilitated	proposal for backfill	backfilling	nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	Backfilling carried out as per approved mining plan as far as possible

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	yes	yes	nil
6b	Area available for rehabilitation (ha) .	0.5Ha	0.28 Ha	nil
6c	afforestation done (ha).	1.0 Ha	1.6 ha	nil
6d	No. of saplings planted during the year	2500 nos	3979 nos	nil
6e	Cumulative no .of plants	-	not accessed	nil
6f	Any other method of rehabilitation	no proposal	nil	nil
6g	Cost incurred on watch and care during the year	-	not accessed	nul
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	0.5ha	0.28ha	nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	281557 cum	231559 cum	nil

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	2500 saplings	3979 saplings	nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no proposal	nil	nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	no proposal	nil	nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	750 sapling	1071 sapling	nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.3 ha	0.43ha	nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	plantation	plantation	nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	As per standard	found within Limit	nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	PMCP proposals as are being implemented.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	no such proposal for ROM	Total Dispatch Lumps a) 55% to below 58%- 62163.300 MT b) 58% to below 60%- 638798.740 MT c) 60% to below 62%- 119064.370 MT Fines a) 55% to below 58%- 335368.81 MT b) 58% to below 60%- 203715.960 MT c) 60% to below 62%- 84309.240 MT	nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	nil
7c	Different grade of mineral sorted out at mines.	Fe more than 45%	Fe more than 45%	nil
7d	Any beneficiation process at mines	Dry Crushing and Screening	Dry Crushing and Screening	nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	Low grade ore is blended with high grade and despatched.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	proposal of utilization of topsoil for the reporting year	Removal - 0 tonnes Utilization - 6 tonnes	Used soil from stack of previous years.
8b	Concurrent use or storage of topsoil	no proposal	nil	nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	separate dump of OB	separate dump of OB	nil

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling of mined out pit	Backfilling of mined out pit	nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	After backfilling in mined out area plantation was proposed in 0.5 Ha and 0.3 Ha in Green Belt	Plantation was done in 1.6 Ha in backfilled area (0.28 ha) and 0.43 Ha in Green Belt	nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3250 nos of sapling proposed to be planted within the lease area.	Total sapling planted this year - A) 5050 -within lease B) 350 - Outside Lease	nil
8g	Survival rate	no proposal	71%	nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust kept in proposal	mobile water sprinkler deployed for water sprinkling	nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	The aesthetic beauty in and around mines area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	All Monthly Return F1 & Annual Return (H1) are submitted within the stipulated time as per MCDR 2017	All Monthly Return F1 & Annual Return (H1) are submitted within the stipulated time as per MCDR 2017	nil

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer & Mines Manager: Sri Debashish Mukherjee, Geologist: Sri Sudipta Das	Mining Engineer & Mines Manager: Sri Debashish Mukherjee, Geologist: Sri Sudipta Das	present during the inspection
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under Covered under current (O-C) Workings: 54.2 ha, Occupied by plant, buildings, residential, welfare buildings and roads: 1.65 ha, Mineral Stoarage: 5.13 ha.	information appears to be in order	nil
9d	Scrutiny of Annual return on afforestation	Plantation within lease area: 5050 nos. survival rate: 70.75%, total trees at end of the year: 35580. Plantation outside lease: 350 nos. survival rate: 80%, total trees at end of the year: 6276 nos.	information appears to be in order	nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	nil	no reject generation during the year	nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock: 722263.906 T, Closing stock: 559166.591 T, Production: 2250806.700 T	informtion appears to be in order	nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price: Rs. 932.42	information appears to be in order	nil

9h	Scrutiny of Annual return on fixed assets	Rs. 2779970822/-	information appears to be in order	nil
9k	Scrutiny of Annual return on mining machineries	Rock Drill (Non-Elec.): 1, Back Hoe: 9, Dozer: 3, Front End Loader: 7, Tipper: 30, Motor Grader: 1, Water Tanker: 5, Crane: 1	information appears to be in order	nil

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(PHILLIP HAPADGARA)

Indian Bureau of Mines